

Complete Summary

GUIDELINE TITLE

Procedure guideline for thyroid uptake measurement.

BIBLIOGRAPHIC SOURCE(S)

Society of Nuclear Medicine. Procedure guideline for thyroid uptake measurement, 2.0. Reston (VA): Society of Nuclear Medicine; 1999 Feb. 15 p. (Society of Nuclear Medicine procedure guidelines; no. 2.0). [9 references]

COMPLETE SUMMARY CONTENT

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SCOPE

DISEASE/CONDITION(S)

Hyperthyroidism (i.e., Graves' disease, toxic nodular goiter, subacute or painless thyroiditis, factitious hyperthyroidism)

GUIDELINE CATEGORY

Diagnosis
 Evaluation

CLINICAL SPECIALTY

Nuclear Medicine
 Radiology

INTENDED USERS

Allied Health Personnel
 Physicians

GUIDELINE OBJECTIVE(S)

To assist nuclear medicine practitioners in recommending, performing, interpreting and reporting the results of thyroid uptake measurements.

TARGET POPULATION

Patients with hyperthyroidism

INTERVENTIONS AND PRACTICES CONSIDERED

Quantitative measurement of uptake of radioiodine by the thyroid. The procedure can also be done with technetium-99m pertechnetate and gamma camera imaging.

MAJOR OUTCOMES CONSIDERED

Appropriate dosing of iodine-131 in treatment of hyperthyroidism

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Literature searches were performed. In addition, references known to experts and references from the nuclear medicine community were considered.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Not stated

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not stated

METHODS USED TO ANALYZE THE EVIDENCE

Systematic Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

Drafts of the guideline were submitted to members of the Guideline Development subcommittee (methodologists) and the Task Force (subject experts). These reviewers indicated on a line-by-line basis any suggestions or recommendations for the revision of the guideline. The percentage of agreement for all reviewers was calculated for each revision and compiled by the Society of Nuclear Medicine (SNM) central office. It is expected that the percentage of agreement will increase with each revision.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

When the Task Force and Guideline Development Subcommittee completed their edits, draft procedure guidelines were distributed to the Society of Nuclear Medicine (SNM) Sample Review Group for comment. (The SNM Sample Review Group is a cross-section of approximately 100 nuclear medicine practitioners representing every field of specialization).

The guideline was approved by the SNM Commission on Health Care Policy, the Board of Directors, and the House of Delegates.

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Background Information and Definitions

Thyroid uptake determination is the measurement of the fraction of an administered amount of radioactive iodine that accumulates in the thyroid at selected times following ingestion. Thyroid uptake can also be determined using intravenously administered Tc-99m pertechnetate and a gamma camera.

Common Indications

- Assist in determining the amount of I-131 to be administered to patients for therapy of hyperthyroidism due to Graves' disease or toxic nodular goiter. The uptake should be performed as close in time as possible to the treatment.
- Differentiate subacute or painless thyroiditis and factitious hyperthyroidism from Graves' disease and other forms of hyperthyroidism.
- Measurement of the radioiodine uptake is of limited value in diagnosing hypothyroidism.

Procedure

The detailed procedure recommendations in the guideline address the following areas: patient preparation; information pertinent to performing the procedure (i.e., important data that the physician should have about the patient at the time the exam is performed and interpreted); precautions; information regarding the radiopharmaceutical (i.e., ranges of administered activity, organ receiving the largest radiation dose, effective dose), image acquisition; interventions; processing; interpretation/reporting; quality control, and sources of error.

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

Not stated

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

The intent of the procedure guideline is to describe thyroid uptake measurement, in order to maximize the diagnostic information obtained in the study while minimizing the resources that are expended.

POTENTIAL HARMS

Not stated

QUALIFYING STATEMENTS

QUALIFYING STATEMENTS

The Society of Nuclear Medicine has written and approved guidelines to promote the cost-effective use of high quality nuclear medicine procedures. These generic recommendations cannot be applied to all patients in all practice settings. The guidelines should not be deemed inclusive of all proper procedures or exclusive of other procedures reasonably directed to obtaining the same results. The spectrum of patients seen in a specialized practice setting may be quite different than the spectrum of patients seen in a more general practice setting. The appropriateness of a procedure will depend in part on the prevalence of disease in the patient population. In addition, the resources available to care for patients may vary greatly from one medical facility to another. For these reasons, guidelines cannot be rigidly applied.

Advances in medicine occur at a rapid rate. The date of a guideline should always be considered in determining its current applicability.

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Living with Illness

IOM DOMAIN

Effectiveness
Safety

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Society of Nuclear Medicine. Procedure guideline for thyroid uptake measurement, 2.0. Reston (VA): Society of Nuclear Medicine; 1999 Feb. 15 p. (Society of Nuclear Medicine procedure guidelines; no. 2.0). [9 references]

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1999 Feb

GUIDELINE DEVELOPER(S)

Society of Nuclear Medicine, Inc - Medical Specialty Society

SOURCE(S) OF FUNDING

Society of Nuclear Medicine (SNM)

GUIDELINE COMMITTEE

Guideline Task Force

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

The Task Force consists of members from both academic and nonacademic practice settings.

Names of Task Force Members: David Backer, MD; David Brill, MD; Kevin Donogoe, MD; Howard Dworkin, MD; Robert Hattner, MD; and Roberta Locko, MD.

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

This guideline updates a previously issued version (Procedure guideline for thyroid uptake measurement: 1.0. Society of Nuclear Medicine. J Nucl Med. 1996 Jul;37(7):1266-8.)

The guideline developer states that the guideline is subject to a bi-annual update/revision cycle.

GUIDELINE AVAILABILITY

Electronic copies: Available from the [Society of Nuclear Medicine \(SNM\) Web site](#).

Print copies: Available from SNM, Division of Health Care Policy, 1850 Samuel Morse Dr, Reston, VA 20190-5316; Phone: 1-800-513-6853 or 1-703-326-1186; Fax: 703-708-9015; E-Mail: ServiceCenter@snm.org.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Society of Nuclear Medicine. Procedure guideline for guideline development. Reston (VA): Society of Nuclear Medicine; 2001 Jun (version 3.0).

Electronic copies: Available from the [Society of Nuclear Medicine Web site](#).

- Society of Nuclear Medicine. Performance and responsibility guidelines for NMT. Reston (VA): Society of Nuclear Medicine; 2003.

Electronic copies: Available from the [Society of Nuclear Medicine Web site](#).

Print copies: Available from SNM, Division of Health Care Policy, 1850 Samuel Morse Dr, Reston, VA 20190-5316; Phone: 1-800-513-6853 or 1-703-326-1186; Fax: 703-708-9015; E-Mail: ServiceCenter@snm.org.

NGC STATUS

This summary was completed by ECRI on May 20, 1999. It was verified by the guideline developer as of May 26, 1999.

COPYRIGHT STATEMENT

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Date Modified: 11/15/2004

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